

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

First Named Inventor:	Lyn Rosenboom	Docket:	457009-2
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Title:	AGRICULTURE IMPLEMENT FRAME, TRACK ASSEMBLY AND CART (as amended)	Examiner:	Jamie L. McGowan

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APPEAL BRIEF

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(i) REAL PARTY IN INTEREST

The real party in interest is the named applicant, Lyn Rosenboom.

(ii) RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences related to the present case.

(iii) STATUS OF CLAIMS

Claims 1, 2, 6–18 and 20–23 are currently pending in the application. Claim 2 has been allowed by the Examiner. Claims 3–5 and 19 have been cancelled. Applicant appeals the final rejection of Claims 1, 6–18 and 21–23.

(iv) STATUS OF AMENDMENTS

Applicant filed an amendment to claim 15 on December 23, 2008, the same date of filing this appeal, to present the rejected claim in a better form for consideration on appeal pursuant to 37 C.F.R. 1.116(b)(2). Specifically, Applicant corrected a clerical error which has resulted in the rejection of claim 15 based upon (1) 35 U.S.C. 112, first paragraph for failing to comply with the written description and (2) 35 U.S.C. 112, first paragraph for failing to comply with the enablement requirement. Examiner issued an Advisory Action January 16, 2009 withdrawing both 35 U.S.C. 112, first paragraph rejections of claim 15 based on Applicant's claim amendment and reply. The listing of claim 15 in the Claims Appendix reflects Applicant's approved claim amendment.

(v) SUMMARY OF CLAIMED SUBJECT MATTER

The presently appealed claims are generally directed to a track assembly.

Specifically, claim 1 recites a track assembly having a frame (58, 59, 60, 61, 65, 66) (p. 3, ¶¶ 50, 56; p. 5, ¶ 75; FIGS. 18-21) including a tensioning structure (134-138) (p. 6, ¶¶ 81-82; FIGS. 22-23) spacing a first wheel (122A, B) (pp. 4-5, ¶ 69; FIGS. 18, 22) from a second wheel (123A, B) (pp. 4-5, ¶ 69; FIGS. 18, 22), a top tandem arm (120) (pp. 4-5, ¶¶ 69, 71; FIGS. 19A-B, 22) pivotally connected to the frame (58) at a pivot member (111) (pp. 4-5, ¶¶ 69, 74; FIGS. 19A-B, 22) enabling the top tandem arm (120) to freely pivot in a substantially vertical plane (p. 5, ¶¶ 72, 73) relative to the frame (66), the first wheel (122A, B) directly connected to the first end (see holes or round sleeve 116, 116A) (p.5, ¶¶ 69, 72; FIGS. 19A, B, 20) of the top tandem arm (120), a bottom tandem arm (118) (p.5, ¶¶ 70, 71; FIG. 22) having a front portion (p.5, ¶ 70, disclosed as “one end”), a rear portion (p.5, ¶ 70, disclosed as “opposite end”), a top portion (208) (p.5, ¶ 70; FIG. 24), and a bottom portion, the top portion (208) pivotally connected (at pin 129A, FIG. 22) to a second end of the top tandem arm (120) (p.4-5, ¶ 69; FIG. 22; disclosed as “rear of the front top tandem arm 120”), the pivot member (111) positioned between the first end and second end of the top tandem arm (120) (FIG. 22), a front tandem arm idler wheel (124A, B) (p. 4-5, ¶ 69; FIGS. 18, 22) operably connected to said front portion (at 113A) (p.5, ¶ 70, FIG. 24) of said bottom tandem arm (118), a rear tandem arm idler wheel (124C, D) (p. 4-5, ¶ 69; FIGS. 18, 22) operably connected to said rear portion (at 113B) (p.5, ¶ 70; FIG. 24) of said bottom tandem arm (118), and a belt (p.4, ¶ 69; FIGS. 18, 22) in engagement with said tandem idler wheels (124A, B, C, D) and said first (122A, B) and second (123A, B) wheels (p.4, ¶ 69; FIGS. 18, 22).

Claim 6 recites a track assembly having a wheel frame (58, 59, 60, 61, 65, 66) (p. 3, ¶¶ 50, 56; p. 5, ¶ 75; FIGS. 18-21) adapted for supporting an implement frame (300) (p.2, ¶

35; FIG. 1), a first tandem arm (120) (pp. 4-5, ¶¶ 69, 71; FIGS. 19A-B, 22) directly connected to an axle (111) (pp. 4-5, ¶¶ 69, 74; FIG. 18) positioned in said wheel frame (59) forming a pivot member (111) (pp. 4-5, ¶¶ 69, 74; FIGS. 19A, 22) for freely rocking generally in a vertical plane (p. 5, ¶¶ 72, 73) about a first pivot axis (111) (pp. 4-5, ¶¶ 69, 74; FIGS. 18, 19A, 22), a first wheel (122A, B) (pp. 4-5, ¶ 69; FIGS. 18, 22) positioned at one end of said wheel frame (at the front main cart pivot axle 59 end) (p. 5, ¶ 74; FIG. 18) and operably connected to said wheel frame by direct attachment to a first end (at holes or round sleeve 116, 116A, p.5., ¶ 69; FIG. 19A, 20) of said first tandem arm (120) and a second wheel (123A, B) (pp. 4-5, ¶ 69; FIGS. 18, 22) operably connected to said wheel frame (at rear main cart pivot axle 58, pp. 4-5, ¶¶ 69, 74; FIGS. 18, 22), a continuous ground-engaging belt (p.4, ¶ 69; FIGS. 18, 22) trained around said first (122A, B) and second wheels (123A, B) and defining an upper run (see FIG. 22) and a lower run (see FIG. 22), said lower run in contact with the ground (see FIG. 22), a first idler wheel structure (118) (p.5, ¶¶ 70, 71; FIG. 22) supported by a second end (at round sleeve 115, pin 129) (p.5, ¶ 69; FIGS. 19A, 22) of said first tandem arm (120), the pivot member (111) being positioned between the first end (at 116, 116A) and the second end (at round sleeve 115, pin 129) of the tandem arm (120) such that said first idler wheel structure (118) and said first wheel (122A, B) rock about said first pivot axis (111) in a reciprocating manner (p. 5, ¶ 73) to maintain a desired distribution of weight between said first wheel (122A, B) and said first idler wheel structure (118), said first idler wheel structure (118) being in contact with said lower run between the first (122A, B) and second wheels (123A, B) (Fig. 22), and a hitch member (62) (p. 5, ¶¶ 77, 79; FIGS. 18, 22) connected to said wheel frame (58, 59, 60, 61, 65, 66) for towing said wheel frame forwardly over the ground, wherein said lower run rolls in contact with the ground (FIG. 22)

and said idler wheel structure (118) moves vertically with the first tandem arm (120) as said wheel frame (58, 59, 60, 61, 65, 66) is towed forwardly over the irregular ground (p. 5, ¶¶ 77, 79; FIGS. 18, 22).

Claim 14 recites a track assembly having a wheel frame (58, 59, 60, 61, 65, 66) (p. 3, ¶¶ 50, 56; p. 5, ¶ 75; FIGS. 18-21) adapted for supporting an implement frame (300) (p.2, ¶ 35; FIG. 1), a first tandem arm (120) (pp. 4-5, ¶¶ 69, 71; FIGS. 19A-B, 22) directly connected to an axle (111) (pp.4-5, ¶¶ 69, 74; FIG. 18) positioned in said wheel frame (59) forming a pivot member (111) (pp. 4-5, ¶¶ 69, 74; FIGS. 19A, 22) for freely rocking generally in a vertical plane (p. 5, ¶¶ 72, 73) about a first pivot axis (111) (pp. 4-5, ¶¶ 69, 74; FIGS. 18, 19A, 22), a first wheel (122A, B) (pp. 4-5, ¶ 69; FIGS. 18, 22) positioned at one end of said wheel frame (at the front main cart pivot axle 59 end) (p. 5, ¶ 74; FIG. 18) and operably connected to said wheel frame (59) by direct attachment to a first end (at holes or round sleeve 116, 116A, p.5., ¶ 69; FIG. 19A, 20) of said first tandem arm (120) and a second wheel (123A, B) (pp. 4-5, ¶ 69; FIGS. 18, 22) operably connected to said wheel frame (at rear main cart pivot axle 58, pp. 4-5, ¶¶ 69, 74; FIGS. 18, 22), a continuous ground-engaging belt (p.4, ¶ 69; FIGS. 18, 22) trained around said first (122A, B) and second wheels (123A, B) and defining an upper run (see FIG. 22) and a lower run (see FIG. 22), said lower run in contact with the ground (see FIG. 22), and a first idler wheel structure (118) (p.5, ¶¶ 70, 71; FIG. 22) supported by a second end (at round sleeve 115, pin 129) (p.5, ¶ 69; FIGS. 19A, 22) of said first tandem arm (120), the pivot member (111) being positioned between the first end (at 116, 116A) and the second end (at round sleeve 115, pin 129) of the tandem arm (120) such that said first idler wheel structure (118) and said first wheel (122A, B) freely rock about said first pivot axis (111) in a reciprocating manner (p. 5, ¶ 73) to maintain a

desired distribution of weight between said first wheel (122A, B) and said first idler wheel structure (118), said first idler wheel structure (118) being in contact with said lower run between the first (122A, B) and second wheels (123A, B) (Fig. 22).

Claim 18 recites a track assembly having a wheel frame (58, 59, 60, 61, 65, 66) (p. 3, ¶¶ 50, 56; p. 5, ¶ 75; FIGS. 18-21) adapted for supporting an implement frame (300) (p.2, ¶ 35; FIG. 1), an arm (120) (pp. 4-5, ¶¶ 69, 71; FIGS. 19A-B, 22) attached to an axle (111) (p.5, ¶ 74; FIG. 18) positioned in said wheel frame (59), said axle (111) comprising a first pivot axis (111) for rocking of said arm (120) generally in a first plane (p. 5, ¶¶ 72, 73), a first wheel (122A, B) (pp. 4-5, ¶ 69; FIGS. 18, 22) positioned at one end of said wheel frame (at the front main cart pivot axle 59 end) (p. 5, ¶ 74; FIG. 18) and operably connected to said wheel frame (59) and operably connected to said wheel frame (59) by said arm (120), a second wheel (123A, B) (pp. 4-5, ¶ 69; FIGS. 18, 22) operably connected to said wheel frame (at rear main cart pivot axle 58, pp. 4-5, ¶¶ 69, 74; FIGS. 18, 22), an idler wheel structure (118) (p.5, ¶¶ 70, 71; FIG. 22) supported by said arm (120) such that said idler wheel structure (118) and said first wheel (122A, B) rock about said first pivot axis (111) in said first plane (p. 5, ¶¶ 72, 73), said idler wheels structure (118) having a second pivot axis (210, 212) (p. 5, ¶ 70, FIG. 24) for rocking of said idler wheel structure (118) in a second plane (p. 5, ¶ 70, FIG. 24) which is perpendicular to said first plane (p. 5, ¶¶ 72, 73), and a continuous ground-engaging belt (p.4, ¶ 69; FIGS. 18, 22) trained around said first (122A, B) and second wheels (123A, B), said idler wheel structure (118) being in contact with said continuous ground-engaging belt (p.4, ¶ 69; FIGS. 18, 22) to maintain a desired distribution of weight of said implement frame (300).

(vi) GROUND OF REJECTION TO BE REVIEWED ON APPEAL

- (1) Whether claims 1 and 12–14 are anticipated under 35 U.S.C. 102(b) by U.S. Patent No. 3,841,424 to Purcell et al. (“Purcell”).
- (2) Whether claims 6–11 and 23 are unpatentable under 35 U.S.C. 103(a) over Purcell in view of U.S. Patent No. 5,373,909 to Dow et al. (“Dow”).
- (3) Whether claims 15, 17 and 18 are unpatentable under 35 U.S.C. 103(a) over Purcell in view of U.S. Patent No. 4,537,267 to Satzler (“Satzler”).
- (4) Whether claim 16 is unpatentable under 35 U.S.C. 103(a) over Purcell in view of Dow, and further in view of Satzler.
- (5) Whether claim 21 is unpatentable under 35 U.S.C. 103(a) over Purcell in view of U.S. Patent No. 6,318,484 to Lykken et al. (“Lykken”).
- (6) Whether claim 22 is unpatentable under 35 U.S.C. 103(a) over Purcell in view of Dow, and further in view of Lykken.

(vii) ARGUMENT

(A) Rejection of Claims under 35 U.S.C. § 102(b)

The term “*prima facie* case” refers only to the initial examination step. *In re Rinehart*, 531 F.2d 1048, 1052 (C.C.P.A. 1976). The Examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability. If that burden is met, the burden of coming forward with evidence or argument shifts to the applicant. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir.1984). If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent. *See In re Grabiak*, 769 F.2d 729,

733 (Fed. Cir.1985). To establish *prima facie* anticipation of a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter. *Chester v. Miller*, 906 F.2d 1574, 1576 n. 2 (Fed. Cir.1990); *In re Donohue*, 766 F.2d 531, 533 (Fed.Cir.1985).

(1) The Purcell reference fails to establish a prima facie case of anticipation sufficient to reject Claims 1 and 12-14 as Purcell fails to disclose a freely pivotable top tandem arm

Independent claim 1 includes the feature of a top tandem arm pivotally connected to a frame at a pivot member to allow the top tandem arm to pivot freely relative to the frame in a vertical plane.

Independent claim 14 includes the feature of a first tandem arm connected to a wheel frame forming a pivot member for freely rocking generally in a vertical plane about a first pivot axis.

Purcell does not disclose these features as the crank 23, which the Examiner asserts is identical structure to Applicant's top tandem arm of claim 1 or first tandem arm of claim 14, is restricted from free pivotal movement or from freely rocking by the attached compression pad 37 engaging plates 38 of the track frame 17. The compression pad 37 engaging plates 38 restrict the pivotal movement of the crank 23 when the bogey-supporting end of the crank 23 is moving upward or toward the track frame 17.

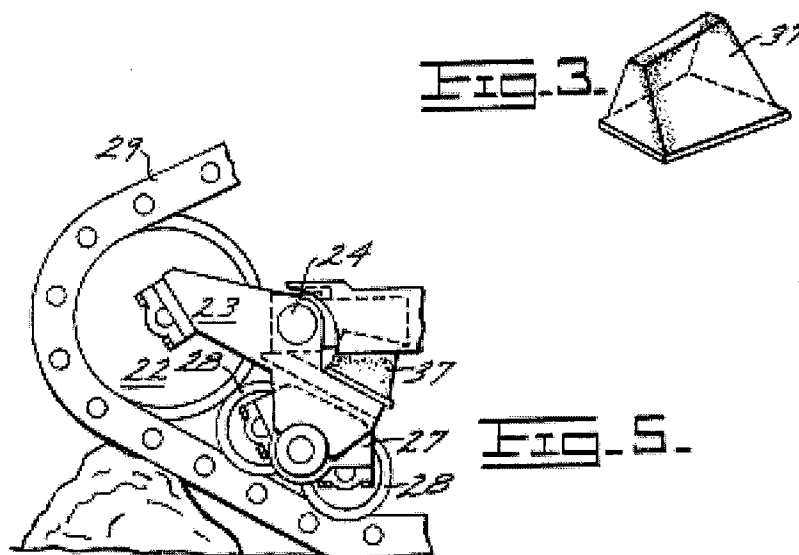
Purcell discloses a triangular track assembly having a pair of cranks 23, each crank 23 having an idler wheel 22 mounted on one end of the crank 23, and bogies 27 mounted at the other end of the crank 23. Each bogie 27 carries a pair of track rollers 28. Located on each crank 23 at a position between the two ends is a trunnion 24. Trunnions 24 are connected to

the track frame 17 at either the forward or rearward extending ends, enabling each crank 23 to pivot in a vertical plane about the track frame 17. (see Purcell, col. 3, lines 3-13; Fig. 1).

Each crank 23 is aligned in parallel with the track frame 17. Further, each crank 23 is positioned directly below the track frame 17. Specifically, the bogie 27 (and track roller 28) side of each crank 23 is positioned directly below the track frame 17. (See Purcell, Figs. 1 and 2). To account for this positioning, each crank 23 has a compression pad 37 attached on the upper surface of the bogey-supporting end of each crank 23. (See Purcell, Figs. 1 and 3). The compression pads 37 project upwardly into recesses within the track frame 17. Each recess holds plates 38. The compression pads 37 act to cushion the upward deflection of bogies 27 (and track rollers 28) by engaging and compressing against the plates 38 when the bogey-supporting end of the crank 23 moves toward the track frame 17. (See Purcell, col. 3, lines 40-61; Figs. 1-5). The compression pad 37 is a necessary feature due to the positioning of the bogies 27 (and track rollers 28) directly below the track frame 17. Without the compression pads 37, the bogey-supporting end of each crank 23 would strike the track frame 17. Instead, the compression pad 37 limits the pivot distance of the bogey-supporting end of the crank 23 when the crank 23 faces a downhill slope, as the bogey-supporting end of the crank 23 is pivotally limited by the compression distance of each compression pad 37. (see Purcell, col. 3, lines 48-61; Figs. 1-5).

The lack of free rotation about trunnion 24 is best illustrated in Fig. 5 of Purcell (attached below). Fig. 5 illustrates the crank 23 traversing an obstacle, wherein the crank 23 pivots about trunnion 24 attached to the end of track frame 17. The illustrated pivot results in the idler 22 side of crank 23 pivoting upward, toward the track frame 17, and the bogey 27

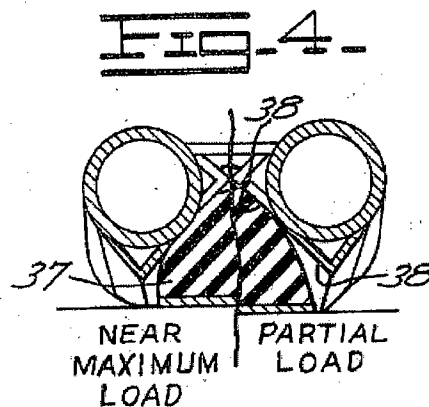
end of the crank 23 pivoting downward, away from the track frame 17. (See Purcell, Fig. 5 (attached below)).



As the obstacle is overcome, the crank 23 pivots on trunnion 24, resulting in the idler 22 side of crank 23 pivoting downward, away from the track frame 17, and the bogey 27 end of the crank 23 pivoting upward, toward the track frame 17. While the bogey 27 end of the crank 23 pivots upward, the compression pad 37 engages plates 38, compressing pad 37 until the pad “occupies substantially all of the nesting area” within track frame 17, as shown in Fig. 4. (Purcell, col. 4, lines 20-29, Fig. 4 (attached below)). Fig. 4 illustrates a top-down view of the deformation of compression pad 37 which occurs upon impacting plates 38 of the track frame 17.

As described in Purcell, when the crank 23 pivots about the track frame 17 so the bogey 27 end of the crank 23 pivots upward, toward the track frame 17, the crank 23 is not freely pivotable. The pivot distance is restricted or limited by compression pad 37 compressing against impacting plates 38. Once fully compressed, compression pad 37 provides a progressive spring rate, moving the bogey 27 end of the crank 23 away from the

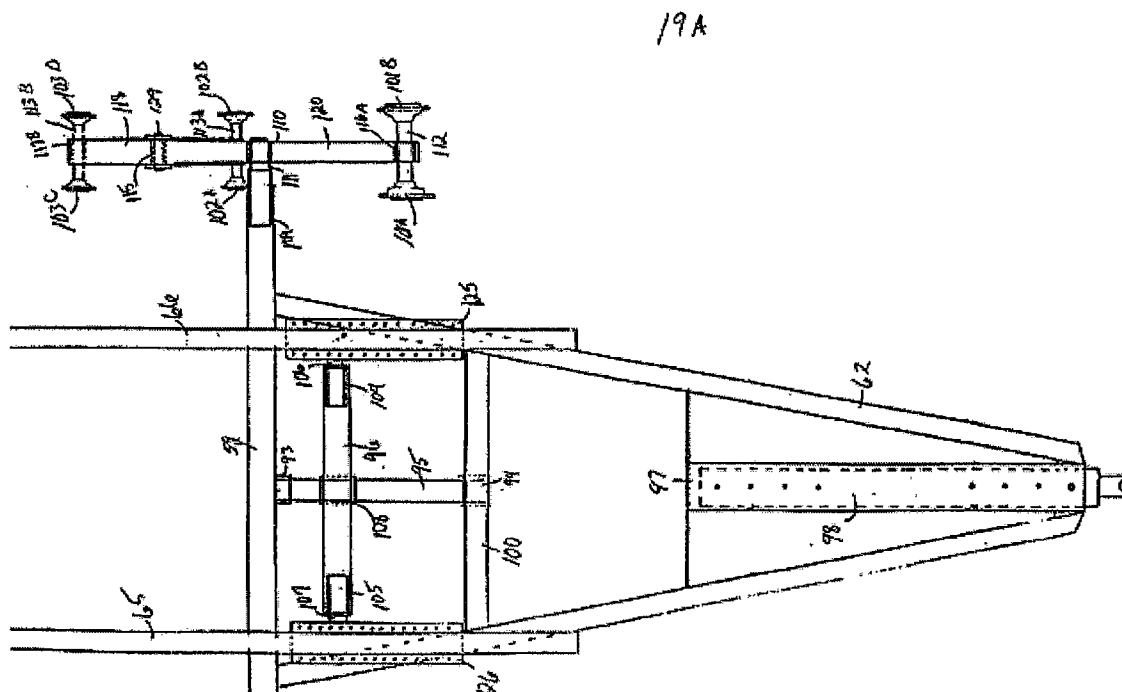
track frame 17. (See Purcell, col. 3, lines 41-61, col. 4, lines 26-29). Clearly, compression pad 37 limits or restricts the pivot distance of crank 23 about trunnion 24.



During examination of a patent application, claims must be interpreted as broadly as their terms reasonably allow. *See* MPEP § 2111.01(I). “This means that the words of the claim must be given their plain meaning, unless the plain meaning is inconsistent with the specification.” *Id.* The Merriam-Webster Dictionary defines the plain meaning of the term “freely” as “in a free manner: as (a) of one's own accord; (b) with freedom from external control; (c) without restraint or reservation; (d) without hindrance; (e) not strictly following a model, convention, or rule.” Merriam-Webster Dictionary Online, *available at* <http://www.merriam-webster.com/dictionary/freely>. From the disclosure of Purcell, the crank 23 does not “pivot freely,” as the crank 23 does not pivot without restraint or reservation, or without hindrance. On the contrary, crank 23, and more specifically the bogey 27 end of crank 23, is limited in the distance it can pivot about trunnion 24 by compression pad 37 engaging plates 38.

In comparison, Applicant’s claimed top tandem arm does “pivot freely,” as Applicant’s top tandem arm (or first tandem arm) has no restraint. As best illustrated in Fig.

19A of Applicant's Application (attached below), the top tandem arm 120 is freely pivotable relative to the frame 59, 65, 66 about pin 111. Neither Applicant's top tandem arm 120, nor the frame to which the top tandem arm 120 is attached has any structural feature which may restrain or restrict the pivot distance of the top tandem arm 120 relative to the frame.



Purcell does not disclose the top tandem arm of claim 1 which is connected to a frame at a pivot member to allow the top tandem arm to pivot freely relative to the frame in a vertical plane. Likewise, Purcell does not disclose the first tandem arm of claim 14 connected to a wheel frame for freely rocking generally in a vertical plane about a first pivot axis. Accordingly, Applicant respectfully requests the Board of Patent Appeals and Interferences to reverse the pending anticipation rejection of claims 1 and 14, as Purcell fails to disclose every claim element. Claims 12 and 13 depend upon claim 1, and are patentable

for the same reasons asserted above and by reason of the additional features set forth respectively therein.

(B) Rejection of Claims under 35 U.S.C. § 103(a)

The Patent Office has the initial burden of establishing a *prima facie* case of obviousness under 35 U.S.C. § 103. *See* MPEP § 2142 (Rev. 6, Sept. 2007). “A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.” *In re Rinehart*, 531 F.2d 1048, 1051 (C.C.P.A. 1976). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385 (C.C.P.A. 1970); *see also* MPEP § 2143.03. “Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.” *In re Fine*, 837 F.2d at 1076 (Fed. Cir. 1988) (citations omitted).

“When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references.” *Ecolochem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1372 (Fed. Cir. 2000) (citations omitted). “Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination.” *Id.* The Supreme Court has supported the applicability of the teaching, suggestion and motivation (“TSM”) test for determining obviousness, however warns of applying the test in an overly rigid and formalistic manner. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, 1741 (2007). Specifically the Court indicated:

When it first established the requirement of demonstrating a teaching, suggestion, or motivation to combine known elements in order to show that the combination is obvious, the Court of Customs and Patent Appeals captured

a helpful insight...a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does....there is no necessary inconsistency between the idea underlying the TSM test and the Graham analysis.

Id. Therefore, the Patent Office must demonstrate at least some objective teaching, suggestion, or motivation in the prior art or knowledge generally held by one of ordinary skill in the art which would lead an individual to modify the relevant teachings of a reference resulting in the combination of elements in the manner claimed. *See id.* The Patent Office must provide “an apparent reason to combine the known elements in the fashion claimed” and the “analysis should be made explicit.” *Id.*

(1) The combination of the Purcell and Dow references fail to establish a *prima facie* case of obviousness for Claims 6-11 and 23

The asserted combination of Purcell and Dow is insufficient to establish a *prima facie* case of obviousness as all claim limitations were not considered by the Examiner. Further the combination of Purcell and Dow is absent some teaching, suggestion, or motivation to combine the references to arrive at the claimed combination, other than through impermissible application of hindsight in view of the present invention.

(a) The prior art does not disclose, teach or suggest all features of independent claims 6 and 14

As explained in detail above, Purcell provides no disclosure, teaching, suggestion, or motivation for a first tandem arm connected to an axle to form a pivot member for freely rocking generally in a vertical plane about a first pivot axis as set forth in independent claim 6. Purcell clearly discloses structural features which restrict the pivot distance of the top

tandem arm (crank 23) about a pivot member (trunnion 24). (See Purcell, col. 3, lines 41-61). Similarly, Dow does not provide a disclosure, teaching, suggestion, or motivation for a top tandem arm which may freely rock in a vertical plane about a first axis. Dow discloses a vehicle 10 having a front drive element 12 and a rear driven element 14 which are mechanically identical. The front drive element 12 carries an engine module 18 which powers both elements 12 and 14 of vehicle 10. The front and rear elements 12 and 14 are coupled by an articulating joint 230. (See Dow, col.4, lines 35-55; Fig. 1). The Examiner simply relies upon Dow to disclose “the track assembly could have a hitch and be towed behind a working vehicle (Figure 1).” (See Final Office Action, June 23, 2008).

Accordingly, neither Purcell nor Dow, alone or in combination, disclose, teach, or suggest all features of independent claim 6.

Similarly, independent claim 14, which claim 23 depends upon, includes the feature of a first tandem arm connected to an axle to form a pivot member for freely rocking generally in a vertical plane about a first pivot axis. As described in the previous paragraph, neither Purcell nor Dow, alone or in combination, disclose, teach, or suggest all features of independent claim 14.

Applicant asserts the cited Purcell and Dow references do not disclose, teach or suggest all claim features. Applicant respectfully requests the Board of Patent Appeals and Interferences to reverse the pending obviousness rejection of independent claims 6, as Purcell fails to disclose every claim element. Claims 7-11 depend upon claim 6 and claim 23 depends upon claim 14, and are patentable for the same reasons asserted above and by reason of the additional features set forth respectively therein.

(b) The Dow reference fails to disclose a track assembly towed behind a working vehicle

The Examiner recites Dow to disclose “the track assembly could have a hitch and be towed behind a working vehicle (Figure 1),” referring to the “hitch member connected to said wheel frame for towing said wheel frame forwardly over the ground” as recited in independent claim 6. (See Final Office Action, June 23, 2008). However, Dow does not provide some teaching, suggestion, or motivation to combine the disclosed structure of Dow with Purcell, as Dow does not disclose a “track assembly...towed behind a working vehicle.”

In fact, Dow discloses a front drive element 12 and a rear driven element 14 coupled by an articulating joint 230, in which both elements 12 and 14 are powered by an engine module 18 carried on the front drive element 12. (See Dow, col.4, lines 35-55; Fig. 1). Accordingly, Dow discloses two driven elements. One element is not towed behind another element. The structure disclosed in Dow is not equivalent to the Examiner’s assertion. Dow is not a proper reference to combine with Purcell to disclose, teach or suggest a track assembly towed behind a working vehicle. Combining the Dow reference with Purcell would not lead to the claimed structure of independent claim 6. Claims 7-11 depend upon claim 6, and are patentable for the same reasons asserted above and by reason of the additional features set forth respectively therein.

(c) The combination of Purcell and Dow do not disclose all claim elements recited in claims 14 and 23

The Examiner asserts the combination of Purcell and Dow disclose the elements of claim 23, which depends upon independent claim 14. As described in detail above, neither Purcell nor Dow, alone or in combination, disclose, teach, or suggest all features of

independent claim 14. Accordingly, claim 23 is patentable for the same reasons asserted above and by reason of the additional features set forth respectively therein.

(2) Claims 15, 16, 17 and 18 are not obvious in view of the combination of the Purcell or the Purcell and Dow references with the Satzler reference

The Examiner asserts dependent claims 15 and 17 and independent claim 18 are obvious in view of Purcell and further in view of Satzler, while the Examiner asserts dependent claim 16 is obvious in view of Purcell and Dow and further in view of Satzler. The Examiner relies upon the Purcell reference, alone or in combination with the Dow reference, to disclose, teach or suggest the structural features of the claimed track assembly, except for “the idler wheel structure can pivot in a second plane which is perpendicular to the first plane.” (June 23, 2008 Office Action at 7-8). The Examiner relies upon Satzler to “teach...this perpendicular pivot...” *Id.*

(a) The Purcell reference, alone or in combination with the Dow reference, fails to establish a *prima facie* case of obviousness for claims 15, 16 and 17

The Examiner applies Purcell, alone or in combination with Dow, to support a finding of obviousness for independent claims 1, 6 and 14, from which claims 15, 16 and 17 depend upon respectively. As discussed in detail above, neither Purcell nor Dow disclose, teach or suggest all elements of claims 1, 6 and 14, specifically a top or first tandem arm which may freely pivot or rock in a vertical plane. Accordingly, claims 15, 16 and 17 are not obvious, as they depend upon independent claims which are not obvious or obvious variations in view of the Purcell and Dow references.

(b) Even if a *prima facie* case of obviousness is established, claims 15, 16, 17 and 18 are not obvious or obvious variations in view of Satzler

Dependent claims 15, 16 and 17 and independent claim 18 all include the feature of a bottom tandem arm or idler wheel structure having a second pivot axis for pivoting in a second plane, the second plane being perpendicular to the first plane which the first tandem arm or arm pivots about the frame. The Examiner has repeatedly asserted that based upon the disclosure of Satzler, which discloses a “a second, perpendicular pivot pin (34)” which “allows the track assembly to adjust when it encounters a raised object on the ground...[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to include the perpendicular pivot of Satzler in the track assembly of Purcell (and Dow) to allow the assembly to adjust for varying road conditions.” (December 19, 2007 Office Action at 8-9; June 23, 2008 Office Action at 7-8). Applicant respectfully asserts the claimed bottom tandem arm or idler wheel structure having an axle or second pivot axis is not obvious, nor an obvious variation of the pivot pin disclosed by Satzler.

When conducting an obviousness analysis “the scope and content of the prior art [is] to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18, 86 S.Ct. 684, 694 (1966). “Consideration of differences, like each of the findings set forth in *Graham*, is...an aid in reaching the ultimate determination of whether the claimed invention *as a whole* would have been obvious.” *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1537 (Fed. Cir. 1983). “In determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is

not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.” MPEP § 2141.02 (emphasis original).

(i) The significant differences between Satzler and Applicant’s claimed invention lead to a finding of nonobviousness

Satzler discloses a belt tensioning mechanism for a belted vehicle. Specifically, the vehicle 10 includes a frame 14 with an axle 20 connected to a front portion of the frame 14. A first pair of wheel assemblies 22, 22’ are rotatably connected to opposite ends of axle 20. A second pair of wheel assemblies 24, 24’ are respectively connected to opposite sides of the rear portion of the frame. Wheel assemblies 22 and 24 are joined by a first inextensible belt 26, while wheel assemblies 22’ and 24’ are joined by a second inextensible belt 28. (Satzler, col. 2, lines 21-39; Figs. 1, 2). The vehicle 10 also include a belt tensioning mechanism 31 having a connecting means 32 for connecting the axle 20 to the frame 14 to allow the axle 20 to swivel and to slide longitudinally relative to the frame. (Satzler, col. 2, lines 40-45; Fig. 3). The connecting means 32 includes a pin 34 connected to the frame 14, and a swivel bearing 36 connected to the axle 20 and slidably disposed on the pin 34. (Satzler, col. 2, lines 45-50; Fig. 3). The swivel bearing 36 allows the axle 20 to pivot about pin 34 in the event one of the wheel assemblies 22, 22’ runs over a raised object on the ground. (Satzler, col. 4, lines 66-68, col. 5, line 1).

Applicant claims a track assembly having a top or first tandem arm pivotally connected to a track assembly frame. The top or first tandem arm has a first end and a second end. A first wheel is connected at the first end of the top or first tandem arm. A bottom tandem arm or idler wheel structure is pivotally connected at the second end of the top or first tandem arm. The top or first tandem arm and the bottom tandem arm or idler

wheel structure both pivot in a first plane. The bottom tandem arm or idler wheel structure also has an axle or second pivot axis enabling the wheels attached to the bottom tandem arm or idler wheel structure to pivot in a second plane perpendicular to the first plane. A continuous ground-engaging belt is trained around the first wheel and idler wheels.

Substantial differences exist based upon the disclosed invention in Satzler and Applicant's claimed invention. First, Satzler discloses a pin 34 and swivel bearing 36 connecting the axle 20 to the frame 14 at a central location on the vehicle 10. Further, the pin 34 and swivel bearing 36 is positioned only at one end (the front end) of the vehicle 10. (See Satzler, Fig. 2 (the pin and bearing illustrated as the circle on axle 20 bisected by plane 18)). Applicant claims an axle or second pivot axis located in the continuous ground-engaging belt, not at a central location on the vehicle.

Second, as disclosed by Satzler, only wheel assemblies 22, 22' are attached to the ends of axle 20, thus only these two "front" wheels, spanning the entire width of the vehicle, can pivot. In effect, the front portion of the entire wheel assemblies housed within each inextensible belt 26, 28 can pivot about the other. Applicant, on the other hand, claims the axle or second pivot axis does not enable the main or first wheel (which corresponds to Satzler's wheel assemblies 22, 22') to pivot. Instead, Applicant's axle or second pivot axis enables secondary wheels (defined by Applicant as idler wheels, but referred in Satzler as a "bogie system 30," col. 2, lines 34-39; Fig. 1) to pivot about the axle or second pivot axis.

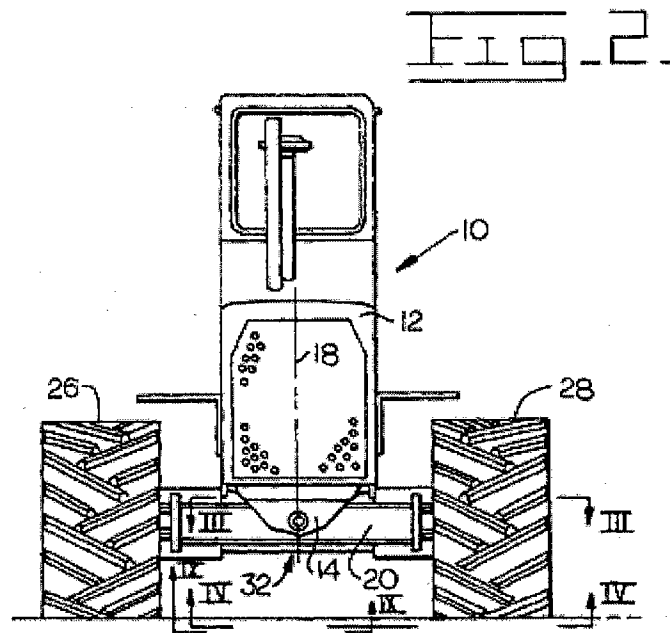
Third, the pin 34 and swivel bearing 36 (together the connecting means 32) disclosed in Satzler is structurally distinct from the axle or second pivot axis claimed by Applicant. As described above, Satzler discloses four wheels, two wheels on one side of a vehicle (22, 24) and two wheels on a second side of the vehicle (22', 24'). An axle 20 connects the front

wheels 22 and 22'. The axle includes a single, central swivel bearing 36. (See Satzler, Fig. 3). The swivel bearing receives a pin 34, which is attached to frame 14. The pin 34 acts is not load bearing and acts as nothing more than a limited pivot point for the swivel bearing 36 (and corresponding axle 20). On the other hand, Applicant's axle or second pivot axis is connected to idler wheels. Accordingly, the axle or second pivot axis has to handle the direct forces and load caused by the idler wheels impacting the ground, while still being able to pivot to account for variations in the terrain, specifically to pivot in a second plane perpendicular to the first plane, or simply the "roll" in "pitch and roll."

Fourth, the pin 34 of Satzler and Applicant's axle or second pivot axis have substantially different results. "Critical to the [obviousness] analysis is an understanding of the particular results achieved by the new combination." *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143 (Fed. Cir. 1985); *see also Gillette v. S.C. Johnson & Son, Inc.*, 919 F.2d 720, 725 (Fed. Cir. 1990) ("An analysis of obviousness of a claimed combination must include consideration of the results achieved by that combination.").

As disclosed in Satzler, only wheel assemblies 22, 22' (front wheels) are pivotable by their connection to the axle 20. Wheel assemblies 24, 24' (rear wheels) are not attached to the pivoting axle 20, or other pivot member or pin. Accordingly the two rear wheels are static. Wheel assemblies 22, 24 and 22', 24' are respectively connected by inextensible belts 26, 28. Thus, while wheel assemblies 22, 22' can pivot about the central pin 34 in the vehicle 10, the pivot distance is limited by the non-pivoting elements (particularly wheel assemblies 24, 24' and the bogie system 30) located within each inextensible belt 26, 28. A large pivot distance would result in each inextensible belt 26, 28 to twist and become dislodged. Further, the connecting means 32, including the central pin 34 and swivel bearing

36, is centrally located on the vehicle and connects the front wheels 22, 22' of the respective wheel assembly structures contained within the inextensible belts 26, 28 to the vehicle (through axle 20). (Satzler, Fig. 2 (attached below)). Accordingly, the inextensible belts 26, 28 can only pivot in a single direction. This does not affect terrain having a single grade, however variable slope terrain, for example convex or concave terrain, will result in one of the inextensible belts 26, 28 losing contact with the terrain.



The axle or second pivot axis claimed by Applicant is not centrally located on the vehicle, but instead located within each track assembly. The axle or second pivot axis pivots in relation to the terrain faced on one side of the vehicle. Further, the axle or second pivot axis is not pivotally affected by the terrain faced on the other side of a vehicle. A vehicle having Applicant's axle or second pivot axis on each of the two sides of a vehicle could face, for example, either convex or concave terrain, and would result in each axle or second pivot axis to pivot independently of the other to ensure the attached idler wheels maintain contact with the terrain.

Based upon the numerous structural differences and substantially different results, it would not have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to include the single, central, perpendicular pivot pin of Satzler in the track assembly of Purcell (or as discussed above, the track assembly of Purcell and Dow) to enable the idler wheels structure in each individual track assembly to adjust for different terrain. Accordingly, Applicant respectfully requests the Board of Patent Appeals and Interferences to reverse the pending obviousness rejections of claims 15, 16, 17 and 18.

(3) Claims 21 and 22 are not obvious in view of the combination of the Purcell or the Purcell and Dow references with the Lykken reference

The Examiner asserts dependent claim 21 is obvious in view of Purcell and further in view of Lykken, while dependent claim 22 is obvious in view of Purcell and Dow and further in view of Lykken. The Examiner relies upon the Purcell reference, alone or in combination with the Dow reference, to disclose, teach or suggest the structural features of the claimed track assembly, except for "an additional wheel on each of the first and second axes." (June 23, 2008 Office Action at 9-10). The Examiner relies upon Lykken to "further disclose that the idler axes each have two wheels (i.e. wheel 162 is made up of two wheels on the same axis and wheel 164 is made up of two wheels on the same axis (See Figure 3))." *Id.*

Lykken discloses a tracked suspension for a vehicle having an endless belt, the suspension having an idler wheel assembly 104 including an elongate horizontally extending idler beam 160 which supports idler wheels 162 and 164, and roller wheels 186 and 188. (Lykken, col. 4, lines 29-31, Fig. 3).

Claim 21 depends upon independent claim 1, while claim 22 depends upon dependent claim 7, which depends upon independent claim 6. As explained in detail above, neither

Purcell, nor the combination of Purcell and Dow provide a disclosure, teaching, suggestion, or motivation for a top or first tandem arm connected to an axle to form a pivot member to pivot freely or freely rock generally in a vertical plane about a first axis as set forth in independent claims 1 and 6. (emphasis added). Purcell clearly discloses structural features which restricts the pivot distance of the top tandem arm (crank 23) about a pivot member (trunnion 24). (See Purcell, col. 3, lines 41-61). Accordingly, neither Purcell nor Dow, alone or in combination, disclose, teach, or suggest all features of independent claims 1 and 6. Applicant respectfully requests the Board of Patent Appeals and Interferences to reverse the pending obviousness rejections of claims 22 and 23 as they depend upon claims 1 and 6, and are patentable for the same reasons asserted above and by reason of the additional features set forth respectively therein.

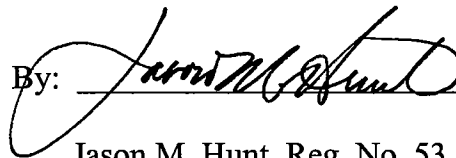
For the reasons set forth above, it is felt each of claims 1, 6-18 and 21-23 are patentably distinct from the prior art and allowance of the same is earnestly solicited.

Respectfully submitted,

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Customer Number 25934

Date: March 23, 2009

By: 

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(viii) CLAIMS APPENDIX

What is claimed is:

1. A track assembly for use in a utility cart, the track assembly comprising:
a frame including a tensioning structure adjustably spacing a first wheel a distance
from a second wheel;
a top tandem arm pivotally connected to said frame at a pivot member such that
said top tandem arm will pivot freely relative to said frame in a
substantially vertical plane, said first wheel being directly connected to a
first end of said top tandem arm at one end of said frame;
a bottom tandem arm having a front portion, a rear portion, a top portion, and a
bottom portion, said top portion of said bottom tandem arm being
pivotally connected to a second end of said top tandem arm, said pivot
member being positioned between said first end and said second end of
said top tandem arm;
a front tandem arm idler wheel operably connected to said front portion of said
bottom tandem arm;
a rear tandem arm idler wheel operably connected to said rear portion of said
bottom tandem arm; and
a belt in engagement with said tandem arm idler wheels and said first and second
wheels.
- 2.–5. (Cancelled, Withdrawn, or Allowed: Not included in appeal)
6. A track assembly for distributing weight of an implement frame as it is towed across
irregular ground, the track assembly comprising:

a wheel frame adapted for supporting an implement frame;

a first tandem arm directly connected to an axle positioned in said wheel frame forming a pivot member for freely rocking generally in a vertical plane about a first pivot axis;

a first wheel positioned at one end of said wheel frame and operably connected to said wheel frame by direct attachment to a first end of said first tandem arm and a second wheel operably connected to said wheel frame;

a continuous ground-engaging belt trained around said first and second wheels and defining an upper run and a lower run, said lower run in contact with the ground;

a first idler wheel structure supported by a second end of said first tandem arm, the pivot member being positioned between the first end and the second end of the tandem arm such that said first idler wheel structure and said first wheel rock about said first pivot axis in a reciprocating manner to maintain a desired distribution of weight between said first wheel and said first idler wheel structure, said first idler wheel structure being in contact with said lower run between the first and second wheels; and

a hitch member connected to said wheel frame for towing said wheel frame forwardly over the ground, wherein said lower run rolls in contact with the ground and said idler wheel structure moves vertically with the first tandem arm as said wheel frame is towed forwardly over the irregular ground.

7. The track assembly as set forth in claim 6, further comprising a second tandem arm supporting a second idler wheel structure, said second tandem arm pivotally connected to said wheel frame for rocking in a generally vertical plane about a second pivot axis, said

second idler wheel structure contacting said lower run between said first and second wheels.

8. The track assembly as set forth in claim 7, wherein said first and second idler wheel structures include a plurality of idler wheels.
9. The track assembly according to claim 8, wherein said idler wheels are mounted on lower tandem arms pivotally connected to said first and second tandem arms.
10. The track assembly according to claim 9, wherein said second tandem arm supports said second wheel.
11. The track assembly as set forth in claim 7, wherein said wheel frame includes a tension bar structure for spacing said first and second wheels, and wherein said first and second tandem arms are pivotally connected to said tension bar structure.
12. The track assembly as set forth in claim 1 wherein said first wheel is a large idler wheel.
13. The track assembly as set forth in claim 1, wherein said front tandem arm idler wheel pivots transversely in a generally vertical plane relative to said bottom tandem arm; and wherein said rear tandem arm idler wheel pivots transversely in a generally vertical plane relative to said bottom tandem arm.
14. A track assembly for distributing weight of an implement frame, the track assembly comprising:
 - a wheel frame adapted for supporting an implement frame;
 - a first tandem arm directly connected to an axle positioned in said wheel frame forming a pivot member for freely rocking generally in a vertical plane about a first pivot axis;

a first wheel positioned at one end of said wheel frame and operably connected to said wheel frame by direct attachment to a first end of said first tandem arm and a second wheel operably connected to said wheel frame;

a continuous ground-engaging belt trained around said first and second wheels and defining an upper run and a lower run, said lower run in contact with the ground;

and

a first idler wheel structure supported by a second end of said first tandem arm, the pivot member being positioned between the first end and the second end of the tandem arm such that said first idler wheel structure and said first wheel freely rock about said first pivot axis in a reciprocating manner to maintain a desired distribution of weight between said first wheel and said first idler wheel structure, said first idler wheel structure being in contact with said lower run between the first and second wheels.

15. (Currently Amended) The track assembly of Claim 1, wherein said top tandem arm and said bottom tandem arm pivot in a first plane, and wherein said assembly further comprises an axle extending ~~perpendicular~~ parallel to said bottom tandem arm and operably connected between said bottom tandem arm and at least one of said idler wheels, said axle being pivotally connected to said bottom tandem arm for pivoting in a second plane which is perpendicular to said first plane, so as to permit said idler wheels to adjust for both pitch and roll.
16. The track assembly of Claim 6, wherein said first tandem arm and first idler wheel structure pivot in a first plane, and wherein said idler wheel structure comprises a second pivot axis for pivoting in a second plane which is perpendicular to said first plane.

17. The track assembly of Claim 14, wherein said first tandem arm and first idler wheel structure pivot in a first plane, and wherein said idler wheel structure comprises a second pivot axis for pivoting in a second plane which is perpendicular to said first plane.
18. A track assembly for distributing weight of an implement frame, the track assembly comprising:
 - a wheel frame adapted for supporting an implement frame;
 - an arm attached to an axle positioned in said wheel frame, said axle comprising a first pivot axis for rocking of said arm generally in a first plane;
 - a first wheel positioned at one end of said wheel frame and operably connected to said wheel frame by said arm;
 - a second wheel operably connected to said wheel frame;
 - an idler wheel structure supported by said arm such that said idler wheel structure and said first wheel rock about said first pivot axis in said first plane, said idler wheels structure having a second pivot axis for rocking of said idler wheel structure in a second plane which is perpendicular to said first plane; and
 - a continuous ground-engaging belt trained around said first and second wheels, said idler wheel structure being in contact with said continuous ground-engaging belt to maintain a desired distribution of weight of said implement frame.
19. (Cancelled or Withdrawn: Not included in appeal)
20. (Not included in appeal)
21. The track assembly as set forth in claim 1, further comprising:
 - the front tandem arm idler wheel further comprising a third wheel and fourth wheel connected by a first axle;

the rear tandem arm idler wheel further comprising a fifth wheel and sixth wheel

connected by a second axle; and

said third, fourth, fifth, and sixth wheels being in contact with said lower run between the first and second wheels.

22. The track assembly as set forth in claim 7, further comprising:

the first idler wheel structure further comprising a third wheel and fourth wheel

connected by a first axle;

the second idler wheel structure further comprising a fifth wheel and sixth wheel

connected by a second axle; and

said third, fourth, fifth, and sixth wheels being in contact with said lower run between the first and second wheels.

23. The track assembly as set forth in claim 14, further comprising:

the first idler wheel structure further comprising a third wheel and fourth wheel, said

third and fourth wheels being in contact with said lower run between the first and second wheels.

(ix) EVIDENCE APPENDIX

None.

(x) RELATED PROCEEDINGS APPENDIX

None.